

**FIFTH GRADE ENVISION MATH CURRICULUM MAP**  
**CANYONS SCHOOL DISTRICT**  
**2011 – 2012**

**Curriculum Mapping Purpose**

Canyons School District's curriculum math maps are standards-based maps driven by the Common Core State Standards and implemented using Scott Foresman-Addison Wesley enVisionMATH ©2011. Student achievement is increased when both teachers and students know where they are going, why they are going there, and what is required of them to get there. To that end, curriculum maps answer these questions:

REVIEW, CORE, EXTEND, ASSESS	COMMON CORE STANDARD	ENVISION LESSON	VOCABULARY & NOTES
<i>What do students know?</i>	<i>What concepts and skills do students need to know?</i>	<i>How will students learn the standards?</i>	<i>What vocabulary is necessary for depth of understanding?</i>

**Curriculum Maps are a tool for:**

- **ALIGNMENT:** Provides support and coordination between concepts, skills, standards, curriculum, and assessments
- **COMMUNICATION:** Articulates expectations and learning goals for students
- **PLANNING:** Focuses instruction and targets critical information
- **COLLABORATION:** Promotes professionalism and fosters dialogue between colleagues about best practices pertaining to sequencing, unit emphasis and length, integration, and review strategies

Canyons School District elementary math maps are created by CSD elementary teachers  
and published by the CSD Office of Evidence-Based Learning.

These maps were collaboratively developed and refined by teacher committees using feedback from classroom teachers, achievement coaches, building administrators, and the office of Evidence-Based Learning. It is with much appreciation that we recognize the many educators that collaborated in the effort to provide these maps for the teachers and students of CSD. Specific individuals that have assisted in the writing and editing of this document include:

Tana	Allred	Karen	Davis	Sheila	McDonald
Marlene	Barbano	Celeste	Erickson	Julie	McFarland
Karen	Bentley	Julie	Fielding	Kimille	Moreton
Catherine	Bond	Barbara	Foltz	Debbie	Owens
Trish	Boswell	Patricia	French	Teresa	Ramey
Jen	Buttars	Melissa	Garber	Joani	Richardson
Rebekah	Callahan	LaNae	Goates	Piper	Riddle
Wendy	Casperson	Elizabeth	Gould	Amber	Roderick-Landward
Trudy	Cloward	Amanda	Hansen	Jan	Shreeve
Stephanie	Cobabe	Lisa	Hubbard	Cathy	Sunderland
Bethany	Cordes	Tanya	Johnson	Nancy	Swinyard
MaryLou	Damjanovich	Kimberly	Jones	Tara	Toraya
Tami	Dautel	Jones	Karlie	Jessica	Vidal
Steve	Davies	Emigh	Lo	LeeAnne	Walker

## TABLE OF CONTENTS

Fifth Grade Common Core At-a-Glance	page 1
Common Core Standards for Mathematical Practice	page 2
General Instructions for the Map	page 3
Fifth Grade Year at a Glance	page 4
Fifth Grade Map	pages 5–43
Fifth Grade Assessment Continuum	page 44
Fifth Grade Vocabulary List	pages 45-46
The Core and More Lesson Checklist	pages 47-51

## Fifth Grade Math Common Core At-a-Glance

**Fifth Grade Overview****Operations and Algebraic Thinking  
(5.OA)**

- Write and interpret numerical expressions.
- Analyze patterns and relationships.

**Number and Operations in Base Ten  
(5.NBT)**

- Understand the place value system.
- Perform operations with multi-digit whole numbers and with decimals to hundredths.

**Number and Operations—Fractions  
(5.NF)**

- Use equivalent fractions as a strategy to add and subtract fractions.
- Apply and extend previous understandings of multiplication and division to multiply and divide fractions.

**Measurement and Data  
(5.MD)**

- Convert like measurement units within a given measurement system.
- Represent and interpret data.
- Geometric measurement: understand concepts of volume and relate volume to multiplication and to addition.

**Geometry  
(4.G)**

- Graph points on the coordinate plane to solve real-world and mathematical problems.
- Classify two-dimensional figures into categories based on their properties.

**Three Critical Areas**

In Grade 5, instructional time should focus on three critical areas:

- developing fluency with addition and subtraction of fractions, and
- developing understanding of the multiplication of fractions and of division of fractions in limited cases (unit fractions divided by whole numbers and whole numbers divided by unit fractions);
- extending division to 2-digit divisors, integrating decimal fractions into the place value system and developing understanding of operations with decimals to hundredths, and developing fluency with whole number and decimal operations; and
- developing understanding of volume.

**Common Core Practice Standards****Overarching habits of mind of a productive mathematical thinker**

1. Make sense of problems and persevere in solving them
6. Attend to precision

**Reasoning and explaining**

2. Reason abstractly and quantitatively
3. Construct viable arguments and critique the reasoning of others

**Modeling and using tools**

4. Model with mathematics
5. Use appropriate tools strategically

**Seeing structure and generalizing**

7. Look for and make use of structure
8. Look for and express regularity in repeated reasoning

## **The Common Core Standards for Mathematical Practice**

The Standards for Mathematical Practice describe varieties of expertise that mathematics educators at all levels should seek to develop in their students. These practices rest on important processes and proficiencies with longstanding importance in mathematics education.

- |  |  |
|--|--|
| <b>1. Make sense of problems and persevere in solving them.</b>            | <b>5. Use appropriate tools strategically.</b>                   |
| <b>2. Reason abstractly and quantitatively.</b>                            | <b>6. Attend to precision.</b>                                   |
| <b>3. Construct viable arguments and critique the reasoning of others.</b> | <b>7. Look for and make use of structure.</b>                    |
| <b>4. Model with mathematics.</b>  | <b>8. Look for and express regularity in repeated reasoning.</b> |

### **Connecting the Standards for Mathematical Practice to the Standards for Mathematical Content**

“The Standards for Mathematical Content are a balanced combination of procedure and understanding. Expectations that begin with the word “understand” are often especially good opportunities to connect the practices to the content. Students who lack understanding of a topic may rely on procedures too heavily. Without a flexible base from which to work, they may be less likely to consider analogous problems, represent problems coherently, justify conclusions, apply the mathematics to practical situations, use technology mindfully to work with the mathematics, explain the mathematics accurately to other students, step back for an overview, or deviate from a known procedure to find a shortcut. In short, a lack of understanding effectively prevents a student from engaging in the mathematical practices” (CCSS, 2010).

- Common Core State Standards Initiative, 2010: Mathematics>Introduction>Standards for Mathematical Practice @ [Corestandards.org](http://Corestandards.org)

**Grade 5**  
General Instructions

**Purpose**

This map was created by 5<sup>th</sup> grade teachers as a scope and sequence to guide and support math curriculum planning and instruction for the year. Please adjust as necessary to meet students' needs.

**Topics**

Topics identified as review are covered in a previous grade. After assessing your students re-teach as necessary.

Topics identified as core must be covered.

Topics identified as enrichment can be used as needed.

**Cumulative Review**

It is critical to provide an ongoing review of previously taught concepts and skills. EnVision's Daily Spiral Review works great!

**Assessment**

Topic assessments will be digitally available on SuccessNet CFA accounts. Topic assessment will also be available in PDF form on the District web Math page and Math teacher wiki page.

Pre-Assessments can be a topic assessment, CFA, or of your own design.

**Common Core Lessons (CC)**

These lessons are part of the common core but not currently presented in enVision math. Each team will receive a paper copy of these lessons. They will also be available digitally on SuccessNet Teacher and CFA accounts.

**Common Formative Assessment (CFA)**

CFA's are an informational assessment for you as a teacher. CFA's are one form of assessment, and the data should be used to help guide and inform your instruction.

*For example:* Which problem(s) did all students get correct? Which problem(s) did a lot of students miss? What concepts need to be re-taught?

There is a period of time (from a few days to 2 weeks) between the end of instruction and the deadline for completion of CFA's.

CFA #1	Topics 1, 2, 3, 4, and 5	completed by November 11	CFA #2	Topics 6, 7, 8, and 9	completed by January 31
CFA # 3	Topics 10, 11, 12, 13, and 14	completed by March 30	CFA # 4	Topics 15, 16, 17, and 18	completed by May 18

## 5th Grade Year-at-a-Glance 2011-2012

Month	MATH CONCEPTS	TOPICS from EnVision	CFA and CBM ASSESSMENT DATES
August (7 days)	<ul style="list-style-type: none"> <li>Numeration</li> </ul>	Topic 1	
September (21 days)	<ul style="list-style-type: none"> <li>Adding and Subtracting Whole Numbers and Decimals</li> <li>Multiplying Whole Numbers</li> </ul>	Topic 2  Topic 3	M-COMP & M-CAP 9/5-9/13
October (17 days)	<ul style="list-style-type: none"> <li>Dividing by 1-Digit Divisors</li> <li>Dividing by 2-Digit Divisors</li> </ul>	Topic 4 Topic 5	
November (18 days)	<ul style="list-style-type: none"> <li>Variables and Expression</li> <li>Multiplying and Dividing Decimals</li> </ul>	Topic 6 Topic 7	CFA #1 - Nov. 11
December (12 days)	<ul style="list-style-type: none"> <li>Multiplying and Dividing Decimals</li> <li>Shapes</li> </ul>	Topic 7 Topic 8	
January (20 days)	<ul style="list-style-type: none"> <li>Fractions and Decimals</li> <li>Adding and Subtracting Fractions and Mixed Numbers</li> <li>Multiplying Fractions and Mixed Numbers</li> </ul>	Topic 9 Topic 10 Topic 11	M-COMP & M-CAP 1/9-1/27  CFA #2 - Jan. 31
February (20 days)	<ul style="list-style-type: none"> <li>Adding and Subtracting Fractions and Mixed Numbers</li> <li>Multiplying Fractions and Mixed Numbers</li> </ul>	Topic 10 Topic 11	
March (20 days)	<ul style="list-style-type: none"> <li>Perimeter and Area</li> <li>Solids</li> <li>Measurement Units, Time, and Temperature</li> </ul>	Topic 12 Topic 13 Topic 14	CFA #3 - Mar. 30
April (16 days)	<ul style="list-style-type: none"> <li>Solving and Writing Equations and Inequalities</li> <li>Ratio and Percent</li> <li>Equations and Graphs</li> </ul>	Topic 15  Topic 16 Topic 17	
May/June (24 Days)	<ul style="list-style-type: none"> <li>Graphs and Data</li> <li>Transformations, congruence, and symmetry</li> <li>Probability</li> </ul>	Topic 18 Topic 19 Topic 20	M-COMP & M-CAP 5/7-5/25  CFA #4 - May 18

**AUGUST 7 days)****TOPIC 1 – NUMERATION****Building Classroom Routine, Beginning of Year Assessment**

REVIEW, CORE, EXTEND, ASSESS	COMMON CORE STANDARD	ENVISION LESSON	NOTES	VOCABULARY
ASSESS		Beginning of Year Testing/Placement Testing	"Placement Test Master" (from Topic 1 in printable resources: <u>Comprehensive</u> pg. 53-58)	<p><b><u>digits:</u></b> The symbols used to write a number: 0, 1, 2, 3, 4, 5, 6, 7, 8, and 9</p> <p><b><u>value:</u></b> the place of a digit in a number tells you the</p> <p><b><u>value:</u></b> The number a digit represents, which is determined by the position of the digit.</p> <p><b><u>standard form:</u></b> A way to write a number showing only its digits. e.g.: 2,613</p> <p><b><u>expanded form:</u></b> A number written as the sum of the values of its digits. e.g.: 2,000 + 400 + 70 + 6</p> <p><b><u>word form</u></b> A number written in words. e.g.: four thousand, six</p>
REVIEW			Beginning of year review (teacher discretion)	
CORE	<b><u>5.NBT.1</u></b> Recognize that in a multi-digit number, a digit in one place represents 10 times as much as it represents in the place to its right and 1/10 of what it represents in the place to its left.	<b>Topic 1:</b> 1-1: Place Value		
REVIEW	<b><u>4.NBT.2</u></b> Read and write multi-digit whole numbers using base-ten numerals, number names, and expanded form. Compare two multi-digit numbers based on meanings of the digits in each place, using $>$ , $=$ , and $<$ symbols to record the results of comparisons.	<b>Topic 1:</b> 1-2: Comparing and Ordering Whole Numbers		
CORE	<b><u>5.NBT.3</u></b> Read, write, and compare decimals to thousandths.	<b>Topic 1:</b> 1-3: Decimal		



	<b>a:</b> Read and write decimals to thousandths using base-ten numerals, number names, and expanded form, e.g., $347.392 = 3 \times 100 + 4 \times 10 + 7 \times 1 + 3 \times (1/10) + 9 \times (1/100) + 2 \times (1/1000)$ .	Place Value		hundred, thirty-two  <b><u>equivalent decimals:</u></b> Decimal numbers that have equivalent value. e.g. $3.5 = 3.50$
CORE	<b><u>5.NBT.3, 5.NBT.3.a</u></b>  <b><u>5.NBT.3.b</u></b> Compare two decimals to thousandths based on meanings of the digits in each place, using $>$ , $=$ , and $<$ symbols to record the results of comparisons.	<b>Topic 1:</b> 1-4: Comparing and Ordering Decimals		
CORE/EXTEND	<b><u>5.NBT.7</u></b> Add, subtract, multiply, and divide decimals to hundredths, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.	<b>Topic 1:</b> 1-5: Problem Solving: Look for a Pattern	This is an extension to 5.NBT.7	
ASSESS		<b>Topic 1:</b> Topic 1 Assessment		

**SEPTEMBER** (21 days)

## TOPIC 2 – ADDING AND SUBTRACTING WHOLE NUMBERS AND DECIMALS

## TOPIC 3- MULTIPLYING WHOLE NUMBERS

REVIEW, CORE, EXTEND, ASSESS	COMMON CORE STANDARD	ENVISION LESSON	NOTES	VOCABULARY
ASSESS	M-CBM	M-COMP & M-CAP		SEPTEMBER 5 - 13
REVIEW	<b>4.NBT.4.</b> Fluently add and subtract multi-digit whole numbers using the standard algorithm.	<b>Topic 2:</b> 2-1: Mental Math		<p><b>commutative property:</b> Numbers can be added in any order and the sum remains the same.</p> <p><b>associative property :</b> Addends can be regrouped and the sum remains the same.</p> <p><b>compensation:</b> Adding and subtracting the same number to make the sum or difference easier to find.</p> <p><b>compatible numbers:</b> Numbers that are easy to compute mentally.</p> <p><b>rounding:</b> Replacing a number with a number that tells about how many or how much.</p>
CORE	<b>5.NBT.4.</b> Use place value understanding to round decimals to any place.	<b>Topic 2:</b> 2-2: Rounding Whole Numbers and Decimals		
CORE	<b>5.NBT.7.</b> Add, subtract, multiply, and divide decimals to hundredths, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.	<b>Topic 2:</b> 2-3: Estimating Sums and Differences		
REVIEW	<b>4.OA.3.</b> Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a	<b>Topic 2:</b> 2-4 Problem Solving: Draw a Picture and Write	Reviews 4.OA.3	

	letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.	an Equation	
REVIEW	<u>5.NBT.7</u>	<b>Topic 2:</b> 2-5: Adding and Subtracting	Reviews 4.NBT.4
CORE	<u>5.NBT.7.</u>	<b>Topic 2:</b> Common Core Supplemental Lesson-1 (CC-1): Modeling Addition and Subtraction of Decimals	-New materials available through SuccessNet
CORE	<u>5.NBT.7</u>	<b>Topic 2:</b> 2-6: Adding Decimals	
CORE	<u>5.NBT.7</u>	<b>Topic 2</b> 2-7: Subtracting Decimals	
CORE	<u>5.NBT.7</u>	<b>Topic 2:</b> 2-8: Problem Solving: Multiple-Step Problems	
ASSESS		<b>Topic 2:</b>	

		Topic 2 Assessment		
REVIEW	<b>3.OA.5.</b> Apply properties of operations as strategies to multiply and divide. <sup>2</sup> <i>Examples: If <math>6 \times 4 = 24</math> is known, then <math>4 \times 6 = 24</math> is also known. (Commutative property of multiplication.) <math>3 \times 5 \times 2</math> can be found by <math>3 \times 5 = 15</math>, then <math>15 \times 2 = 30</math>, or by <math>5 \times 2 = 10</math>, then <math>3 \times 10 = 30</math>. (Associative property of multiplication.) Knowing that <math>8 \times 5 = 40</math> and <math>8 \times 2 = 16</math>, one can find <math>8 \times 7</math> as <math>8 \times (5 + 2) = (8 \times 5) + (8 \times 2) = 40 + 16 = 56</math>. (Distributive property.)</i>	<b>Topic 3:</b> 3-1: Multiplication Properties		<p><b><u>commutative property of multiplication:</u></b> Factors can be multiplied in any order and the product remains the same.</p> <p><b><u>associative property of multiplication:</u></b> Factors can be regrouped and the product remains the same.</p>
CORE	<b>5.NBT.2.</b> Explain patterns in the number of zeros of the product when multiplying a number by powers of 10, and explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10. Use whole-number exponents to denote powers of 10.	<b>Topic 3:</b> 3-2: Using Mental Math to Multiply		<p><b><u>identity property of multiplication:</u></b> The product of any number and one is that number.</p> <p><b><u>zero property of multiplication:</u></b> The product of any number and zero is zero.</p>
CORE	<b>5.NBT.5.</b> Fluently multiply multi-digit whole numbers using the standard algorithm.	<b>Topic 3:</b> 3-3: Estimating Products		<p><b><u>factors:</u></b> The numbers multiplied together to find a product.</p>
CORE	<b>5.NBT.5</b>	<b>Topic 3:</b> 3-4: Multiplying by 1-Digit Numbers		<p><b><u>product :</u></b> The answer to a multiplication problem.</p> <p><b><u>multiple :</u></b> The product of any two whole numbers.</p>
CORE	<b>5.NBT.5</b>	<b>Topic 3:</b> 3-5: Multiplying 2-		<p><b><u>overestimate:</u></b> An estimate that is greater than</p>

		Digit by 2-Digit Numbers		the exact answer.
CORE	<u>5.NBT.5</u>	<b>Topic 3:</b> 3-6: Multiplying Greater Numbers		<b><u>underestimate:</u></b> An estimate that is less than the exact answer.
CORE	<u>5.NBT.2</u>	<b>Topic 3:</b> 3-7: Exponents		<b><u>power:</u></b> "1. The value of a number or quantity raised to some exponent 2. Another name for exponent"
ASSESS		<b>Topic 3:</b> Topic 3 Assessment		<p><b><u>squared:</u></b> A number multiplied by itself, or raised to the second power. The square of three is nine; the square of nine is eighty-one.</p> <p><b><u>cubed :</u></b> To raise to the third power.</p> <p><b><u>base:</u></b> A number that is multiplied by itself the number of times shown by an exponent. ex.: in <math>5^4</math>, the 5 is the base</p> <p><b><u>exponent:</u></b> A number that tells how many times the base is used as a factor.</p> <p><b><u>exponential notation:</u></b> A way to write a number using a base and an exponent.</p> <p><b><u>expanded form:</u></b> A way to write a number that shows the place value of each digit. ex.:</p>

				$3,000 + 500 + 60 + 2$  <b><u>standard form:</u></b> A common way of writing a number with commas separating groups of three digits starting from the right. ex.: 3,458  <b><u>distributive property:</u></b> Multiplying a sum (or difference) by a number is the same as multiplying each number in the sum (or difference) by the number and adding (or subtracting) the products.  <b><u>partial products :</u></b> Products found by breaking one of two factors into ones, tens, hundreds, and so on, and then multiplying each of these by the other factor.
--	--	--	--	---

**OCTOBER (17 days)**

TOPIC 4 – DIVIDING BY 1-DIGIT DIVISORS

TOPIC 5 - DIVIDING BY 2-DIGIT DIVISORS

REVIEW, CORE, EXTEND, ASSESS	COMMON CORE STANDARD	ENVISION LESSON	NOTES	VOCABULARY
CORE	<b>3.OA.5.</b> Apply properties of operations as strategies to multiply and divide. <i>2 Examples: If <math>6 \times 4 = 24</math> is known, then <math>4 \times 6 = 24</math> is also known. (Commutative property of multiplication.) <math>3 \times 5 \times 2</math> can be found by <math>3 \times 5 = 15</math>, then <math>15 \times 2 = 30</math>, or by <math>5 \times 2 = 10</math>, then <math>3 \times 10 = 30</math>. (Associative property of multiplication.) Knowing that <math>8 \times 5 = 40</math> and <math>8 \times 2 = 16</math>, one can find <math>8 \times 7</math> as <math>8 \times (5 + 2) = (8 \times 5) + (8 \times 2) = 40 + 16 = 56</math>. (Distributive property.)</i>	<b>Topic 4:</b> 4-1: Dividing Multiples of 10 and 100		<b>dividend :</b> The number to be divided  <b>divisor :</b> The number used to divide another number.  <b>quotient:</b> The answer to a division problem.
CORE	<b>5.NBT.6.</b> Find whole-number quotients of whole numbers with up to four-digit dividends and two-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.	<b>Topic 4:</b> 4-2: Estimating Quotients		
CORE	<b>5.NBT.6</b>	<b>Topic 4:</b> 4-3: Problem Solving: Reasonableness	Extends 5.NBT.6	
CORE	<b>5.NBT.6</b>	<b>Topic 4:</b> 4-4: Connecting Models and Symbols		
CORE		<b>Topic 4:</b>		

	<b><u>5.NBT.6</u></b>	4-5: Dividing by 1-Digit Divisors		
CORE	<b><u>5.NBT.6</u></b>	<b>Topic 4:</b> 4-6: Zeros in the Quotient		
REVIEW	<b><u>4.OA.4.</u></b> Find all factor pairs for a whole number in the range 1–100. Recognize that a whole number is a multiple of each of its factors. Determine whether a given whole number in the range 1–100 is a multiple of a given one-digit number. Determine whether a given whole number in the range 1–100 is prime or composite.	<b>Topic 4:</b> 4-7: Understanding Factors	Reviews 4.OA.4	
REVIEW	<b><u>4.OA.4</u></b>	<b>Topic 4:</b> 4-8: Prime and Composite Numbers	Reviews 4.OA.4	
CORE	<b><u>5.NBT.6</u></b>	<b>Topic 4:</b> 4-9: Problem Solving: Drawing a Picture and Write an Equation	Extends 5.NBT.6	
ASSESS		<b>Topic 4:</b> Topic 4 Assessment		
CORE	<b><u>5.NBT.5</u></b>	<b>Topic 5:</b> 5-1: Using Patterns to Divide		



CORE	<b><u>5.NBT.6</u></b>	<b>Topic 5:</b> 5-2: Estimating Quotients with 2- Digit Divisors		
CORE	<b><u>5.NBT.6</u></b>	<b>Topic 5:</b> CC-2: Connecting Models and Symbols		
CORE	<b><u>5.NBT.7.</u></b> Add, subtract, multiply, and divide decimals to hundredths, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.	<b>Topic 5:</b> 5-3: Problem Solving: Multiple-Step Problems		
CORE	<b><u>5.NBT.6</u></b>	<b>Topic 5:</b> 5-4: Dividing by Multiples of 10		
CORE	<b><u>5.NBT.6</u></b>	<b>Topic 5:</b> 5-5: 1-Digit Quotients		
CORE	<b><u>5.NBT.6</u></b>	<b>Topic 5:</b> 5-6: 2- Digit Quotients		
CORE	<b><u>5.NBT.6</u></b>	<b>Topic 5:</b> 5-7: Estimating and Dividing with Greater		

		Numbers		
CORE	<b><u>5.NBT.5</u></b>	<b>Topic 5:</b> 5-8: Problem Solving: Missing or Extra Information		
ASSESS		<b>Topic 5:</b> Topic 5 Assessment		

**NOVEMBER & DECEMBER** (18 days & 12 days)

TOPIC 6 – VARIABLES AND EXPRESSIONS

TOPIC 7 - MULTIPLYING AND DIVIDING DECIMALS

TOPIC 8 - SHAPES

REVIEW, CORE, EXTEND, ASSESS	COMMON CORE STANDARD	ENVISION LESSON	NOTES	VOCABULARY
CORE	<b>5.NBT.6.</b> Find whole-number quotients of whole numbers with up to four-digit dividends and two-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.	<b>Topic 6:</b> 6-1: Variables and Expressions		<p><b>variable:</b> A symbol or letter that stands for a number.</p> <p><b>algebraic expression :</b> An expression with variables</p> <p><b>order of operations:</b> The order in which operations are done in calculations. Work inside parentheses is done first. next, terms with exponents are evaluated. Then multiplication and division are done in order from left to right, and finally addition and subtraction are done in order from left to right.</p> <p><b>sequences:</b> an ordered list of terms</p> <p><b>corresponding terms:</b> two terms that are in the same position</p>
CORE	<b>5.NBT.6</b>	<b>Topic 6:</b> 6-2: Patterns and Expressions	Extends 5.OA.2	
CORE	<b>5.OA.3.</b> Generate two numerical patterns using two given rules. Identify apparent relationships between corresponding terms. Form ordered pairs consisting of corresponding terms from the two patterns, and graph the ordered pairs on a coordinate plane. <i>For example, given the rule “Add 3” and the starting number 0, and given the rule “Add 6” and the starting number 0, generate terms in the resulting sequences, and observe that the terms in one sequence are twice the corresponding terms in the other sequence. Explain informally why this is so.</i>	<b>Topic 6:</b> 6-3: More Patterns and Expressions		
CORE		<b>Topic 6:</b>		

		CC-3: Patterns: Extending Tables	
CORE	<u>5.NBT.6</u>	<b>Topic 6:</b> 6-4: Distributive Property	
CORE	<u>5.NBT.6</u>	<b>Topic 6:</b> 6-5: Order of Operations	
CORE	<u>5.NBT.6</u>	<b>Topic 6:</b> CC-4: Evaluating Expressions	
CORE	<u>5.OA.3</u>	<b>Topic 6:</b> CC-5: Addition and Subtraction Expressions	
CORE	<u>5.NBT.6</u>	<b>Topic 6:</b> CC-6: Multiplication and Division Expressions	
REVIEW	<u>4.OA.3.</u> Solve multi-step word problems	<b>Topic 6:</b>	Reviews

	posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.	6-6: Problem Solving: Act It Out and Use Reasoning	4.OA.3	
ASSESS		<b>Topic 6:</b>  Topic 6 Assessment		
ASSESS	CFA #1	Topics 1, 2, 3, 4, 5		Completed by November 11
CORE	<b>5.NBT.1.</b> Recognize that in a multi-digit number, a digit in one place represents 10 times as much as it represents in the place to its right and 1/10 of what it represents in the place to its left. <b>5.NBT.2.</b> Explain patterns in the number of zeros of the product when multiplying a number by powers of 10, and explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10. Use whole-number exponents to denote powers of 10.	<b>Topic 7:</b> 7-1: Multiplying Decimals by 10, 100, or 1,000		
CORE	<b>5.NBT.7.</b> Add, subtract, multiply, and divide	<b>Topic 7:</b>		

	decimals to hundredths, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.	7-2: Multiplying a Decimal by a Whole Number	
CORE	<u>5.NBT.7.</u>	<b>Topic 7:</b> 7-3: Estimating the Product of a Decimal and a Whole Number	
CORE	<u>5.NBT.7.</u>	<b>Topic 7:</b> CC-7: Number Sense: Decimal Multiplication	
CORE	<u>5.NBT.7.</u>	<b>Topic 7:</b> CC-8: Models for Multiplying Decimals	
CORE	<u>5.NBT.7.</u>	<b>Topic 7:</b> 7-4: Multiplying Two Decimals	
CORE	<u>5.NBT.2, 5.NBT.7.</u>	<b>Topic 7:</b> 7-5: Dividing Decimals by 10, 100, or 1,000	
CORE	<u>5.NBT.7.</u>	<b>Topic 7:</b> CC-9: Number	

		Sense: Decimal Division		
CORE	<u>5.NBT.7.</u>	<b>Topic 7:</b> 7-6: Dividing a Decimal by a Whole Number		
CORE	<u>5.NBT.7.</u>	<b>Topic 7:</b> 7-7: Estimation: Decimals Divided by a Whole Number		
CORE	<u>5.NBT.7.</u>	<b>Topic 7:</b> 7-8: Dividing a Decimal by a Decimal		
REVIEW	<u>5.NBT.7.</u>	<b>Topic 7:</b> 7-9: Problem Solving: Multiple-Step Problems	Reviews 4.OA.3	
ASSESS		<b>Topic 7:</b> Assessment		
REVIEW	<u>4.G.1.</u> Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures	<i>If needed for pacing, Topic 8 could be taught in the Spring.</i>	Reviews 4.G.1	<b>polygon:</b> A closed plane figure made up of line segments.

		<b>Topic 8:</b> 8-1: Basic Geometric		<b>regular polygon:</b> A polygon that has sides of equal length and angles of equal measure.
REVIEW	<b>4.G.1.</b> Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures <b>4.MD.5.</b> Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint, and understand concepts of angle measurement.	<b>Topic 8:</b> 8-2: Measuring and Classifying Angles	Reviews 4.G.1, 4.MD.5	<b>triangle:</b> A polygon with 3 sides. <b>quadrilateral:</b> A polygon with 4 sides. <b>pentagon:</b> A polygon with 5 sides. <b>hexagon:</b> A polygon with 6 sides.
CORE	<b>5.G.3</b> Understand that attributes belonging to a category of two-dimensional figures also belong to all subcategories of that category. For example, all rectangles have four right angles and squares are rectangles, so all squares have four right angles. <b>5.G.4</b> Classify two-dimensional figures in a hierarchy based on properties.	<b>Topic 8:</b> 8-3: Polygons		<b>octagon:</b> A polygon with 8 sides. <b>equilateral triangle</b> A triangle in which all sides are the same length. <b>isosceles triangle:</b> A triangle that has at least two equal sides.
CORE	<b>5.G.3, 5.G.4</b>	<b>Topic 8:</b> 8-4: Triangles		<b>scalene triangle:</b> A triangle in which no sides are the same length.
CORE	<b>5.G.3, 5.G.4</b>	<b>Topic 8:</b> 8-5: Quadrilaterals		<b>right triangle:</b> A triangle in which there is one right angle.
CORE	<b>5.G.3, 5.G.4</b>	<b>Topic 8:</b> CC-10: Special Quadrilaterals		



CORE	<u>5.G.4</u>	<b>Topic 8:</b> CC-11: Classifying Quadrilaterals		<p><b><u>acute triangle:</u></b> A triangle with three acute angles.</p> <p><b><u>obtuse triangle:</u></b> A triangle in which there is one obtuse angle.</p> <p><b><u>parallelogram:</u></b> A quadrilateral in which opposite sides are parallel.</p>
CORE	<u>5.G.3, 5.G.4</u>	<b>Topic 8:</b> 8-6: Problem Solving: Make and Test Generalizations		<p><b><u>trapezoid:</u></b> A quadrilateral with only one pair of parallel sides.</p> <p><b><u>rectangle:</u></b> A quadrilateral with 4 right angles.</p> <p><b><u>rhombus:</u></b> A quadrilateral in which opposite sides are parallel and all sides are the same length.</p> <p><b><u>square:</u></b> A quadrilateral with 4 right angles and sides the same length.</p> <p><b><u>generalization:</u></b> A general statement. Example: A generalization about rectangles applies to all rectangles.</p> <p><b><u>polygon:</u></b> A closed plane figure made up of line segments.</p>
ASSESS		<b>Topic 8:</b> Topic 8 Assessment		

				<p><b><u>regular polygon:</u></b> A polygon that has sides of equal length and angles of equal measure.</p> <p><b><u>triangle:</u></b> A polygon with 3 sides.</p> <p><b><u>quadrilateral:</u></b> A polygon with 4 sides.</p> <p><b><u>pentagon:</u></b> A polygon with 5 sides.</p> <p><b><u>hexagon:</u></b> A polygon with 6 sides.</p> <p><b><u>octagon:</u></b> A polygon with 8 sides.</p> <p><b><u>equilateral triangle</u></b> A triangle in which all sides are the same length.</p> <p><b><u>isosceles triangle:</u></b> A triangle that has at least two equal sides.</p> <p><b><u>scalene triangle:</u></b> A triangle in which no sides are the same length.</p> <p><b><u>right triangle:</u></b> A triangle in which there is one right angle.</p> <p><b><u>acute triangle:</u></b> A triangle with three acute angles.</p>
--	--	--	--	--

				<p><b><u>obtuse triangle:</u></b> A triangle in which there is one obtuse angle.</p> <p><b><u>parallelogram:</u></b> A quadrilateral in which opposite sides are parallel.</p> <p><b><u>trapezoid:</u></b> A quadrilateral with only one pair of parallel sides.</p> <p><b><u>rectangle:</u></b> A quadrilateral with 4 right angles.</p> <p><b><u>rhombus:</u></b> A quadrilateral in which opposite sides are parallel and all sides are the same length.</p> <p><b><u>square:</u></b> A quadrilateral with 4 right angles and sides the same length.</p>
--	--	--	--	---

**JANUARY & FEBRUARY** (20 days & 20 days)

Topic 9 - Fractions and Decimals

Topic 10 - Adding and Subtracting Fractions and Mixed Numbers

Topic 11- Multiplying Fractions and Mixed Numbers

REVIEW, CORE, EXTEND, ASSESS	COMMON CORE STANDARD	ENVISION LESSON	NOTES	VOCABULARY
ASSESS	M-CBM	M-COMP & M-CAP		JANUARY 9 - 27
REVIEW	<b><u>3.NF.1</u></b>	<b>Topic 9:</b> 9-1: Meanings of Fractions	Reviews 3.NF.1	<b><u>Equivalent Fractions:</u></b> Fractions that name the same region, part of a set, or part of a segment.  <b><u>Simplest Form:</u></b> A fraction in which the numerator and denominator have no common factors other than 1.  <b><u>Benchmark Fraction:</u></b> Fractions that are commonly used for estimation: 1/4, 1/3, 1/2, 2/3, and 3/4.  <b><u>Proper Fraction:</u></b> A fraction
CORE	<b><u>5.NF.3.</u></b> Interpret a fraction as division of the numerator by the denominator ( $a/b = a \div b$ ). Solve word problems involving division of whole numbers leading to answers in the form of fractions or mixed numbers, e.g., by using visual fraction models or equations to represent the problem. For example, interpret $3/4$ as the result of dividing 3 by 4, noting that $3/4$ multiplied by 4 equals 3, and that when 3 wholes are shared equally among 4 people each person has a share of size $3/4$ . If 9 people want to share a 50-pound sack of rice equally by weight, how many pounds of rice should each person get? Between what two whole numbers does your answer lie?	<b>Topic 9:</b> 9-2: Fractions and Division		
CORE	<b><u>5.NF.3.</u></b> Interpret a fraction as division of the numerator by the denominator ( $a/b = a \div b$ ).	<b>Topic 9:</b> 9-3: Mixed Numbers and Improper		

	<p>Solve word problems involving division of whole numbers leading to answers in the form of fractions or mixed numbers, e.g., by using visual fraction models or equations to represent the problem.</p> <p><i>For example, interpret <math>\frac{3}{4}</math> as the result of dividing 3 by 4, noting that <math>\frac{3}{4}</math> multiplied by 4 equals 3, and that when 3 wholes are shared equally among 4 people each person has a share of size <math>\frac{3}{4}</math>. If 9 people want to share a 50-pound sack of rice equally by weight, how many pounds of rice should each person get? Between what two whole numbers does your answer lie?</i></p>	Fractions		<p>whose numerator is less than its denominator.</p> <p><b>Improper Fraction:</b> A fraction whose numerator is greater than or equal to its denominator.</p> <p><b>Mixed Number:</b> A number that has a whole number and a fraction.</p>
REVIEW	<p><b>4.NF.1.</b></p> <p>Explain why a fraction <math>\frac{a}{b}</math> is equivalent to a fraction <math>\frac{n \times a}{n \times b}</math> by using visual fraction models, with attention to how the number and size of the parts differ even though the two fractions themselves are the same size. Use this principle to recognize and generate equivalent fractions.</p>	<b>Topic 9:</b> 9-4 Equivalent Fractions		
REVIEW	<p><b>4.NF.2.</b></p> <p>Compare two fractions with different numerators and different denominators, e.g., by creating common denominators or numerators, or by comparing to a benchmark fraction such as <math>\frac{1}{2}</math>. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with symbols <math>&gt;</math>, <math>=</math>, or <math>&lt;</math>, and justify the conclusions, e.g., by using a visual fraction model</p>	<b>Topic 9:</b> 9-5 Comparing and Ordering Fractions and Mixed Numbers		
REVIEW	<p><b>4.OA.4.</b> Find all factor pairs for a whole number in the range 1–100. Recognize that a whole number is a multiple of each of its factors. Determine whether a given whole number in the range 1–100 is a multiple of a given one-digit number. Determine whether a given whole number in the range 1–100 is prime or composite.</p>	<b>Topic 9:</b> 9-6 Common Factors and Greatest Common Factor		

CORE	<b>5.NF.1.</b> Add and subtract fractions with unlike denominators (including mixed numbers) by replacing given fractions with equivalent fractions in such a way as to produce an equivalent sum or difference of fractions with like denominators. <i>For example, <math>2/3 + 5/4 = 8/12 + 15/12 = 23/12</math>. (In general, <math>a/b + c/d = (ad + bc)/bd</math>.)</i>	<b>Topic 9:</b> 9-7 Fractions in Simplest Form	
CORE	<b>5.NBT.3.</b> Read, write, and compare decimals to thousandths. <ul style="list-style-type: none"> <li>Read and write decimals to thousandths using base-ten numerals, number names, and expanded form, e.g., <math>347.392 = 3 \times 100 + 4 \times 10 + 7 \times 1 + 3 \times (1/10) + 9 \times (1/100) + 2 \times (1/1000)</math>.</li> <li>Compare two decimals to thousandths based on meanings of the digits in each place, using <math>&gt;</math>, <math>=</math>, and <math>&lt;</math> symbols to record the results of comparisons.</li> </ul>	<b>Topic 9:</b> 9-8 Tenths and Hundredths	
CORE	<b>5.NBT.3.a</b>	<b>Topic 9:</b> 9-9 Thousandths	
REVIEW	<b>4.NF.7.</b> Compare two decimals to hundredths by reasoning about their size. Recognize that comparisons are valid only when the two decimals refer to the same whole. Record the results of comparisons with the symbols $>$ , $=$ , or $<$ , and justify the conclusions, e.g., by using a visual model.	<b>Topic 9:</b> 9-10 Fractions and Decimals on the Number Line	
CORE	<b>4.NF.7.</b> Compare two decimals to hundredths by reasoning about their size. Recognize that comparisons are valid only when the two decimals refer to the same whole. Record the results of comparisons with the symbols $>$ , $=$ , or $<$ , and justify the conclusions, e.g., by using a visual model.	<b>Topic 9:</b> 9-11 Problem Solving: Writing to Explain	
ASSESS	CFA #2	Topics 6, 7, 8, and 9	Completed by January 31

CORE	<b>5.NF.2.</b> Solve word problems involving addition and subtraction of fractions referring to the same whole, including cases of unlike denominators, e.g., by using visual fraction models or equations to represent the problem. Use benchmark fractions and number sense of fractions to estimate mentally and assess the reasonableness of answers. For example, recognize an incorrect result $2/5 + 1/2 = 3/7$ , by observing that $3/7 < 1/2$ .	<b>Topic 10:</b> CC-12 Estimating Sums and Differences of Fractions		<p><b>Common Multiple:</b> A number that is a factor of two or more given numbers.</p> <p><b>Least Common Multiple (LCM):</b> The least number that is a common multiple of two or more numbers.</p> <p><b>Common Denominator:</b> A number that is the denominator of two or more fractions.</p> <p><b>Least Common Denominator (LCD):</b> The least common multiple of the denominators of two or more fractions.</p>
CORE	<b>5.NF.2</b>	<b>Topic 10:</b> 10-1 Adding and Subtracting Fractions with Like Denominators		
CORE	<b>5.NF.1.</b> Add and subtract fractions with unlike denominators (including mixed numbers) by replacing given fractions with equivalent fractions in such a way as to produce an equivalent sum or difference of fractions with like denominators. For example, $2/3 + 5/4 = 8/12 + 15/12 = 23/12$ . (In general, $a/b + c/d = (ad + bc)/bd$ .)	<b>Topic 10:</b> 10-2 Common Multiples and Least Common Multiple		
CORE	<b>5.NF.1, 5.NF.2</b>	<b>Topic 10:</b> 10-3 Adding Fractions with Unlike Denominators		
CORE	<b>5.NF.1, 5.NF.2</b>	<b>Topic 10:</b> 10-4 Subtracting Fractions with Unlike		

		Denominators	
CORE	<u>5.NF.1, 5.NF.2</u>	<b>Topic 10:</b> CC-13 Modeling Addition and Subtraction of Mixed Numbers	
CORE	<u>5.NF.1, 5.NF.2</u>	<b>Topic 10:</b> 10-5 Adding Mixed Numbers	
CORE	<u>5.NF.1, 5.NF.2</u>	<b>Topic 10:</b> 10-6 Subtracting Mixed Numbers	
CORE	<u>5.NF.1, 5.NF.2</u>	<b>Topic 10:</b> CC-14 More Adding and Subtracting Mixed Numbers	
CORE	<u>5.NF.5.</u> Interpret multiplication as scaling (resizing), by comparing the size of a product to the size of one factor on the basis of the size of the other factor, without performing the indicated multiplication.	<b>Topic 10:</b> 10-7 Problem Solving: Try, Check, and Review	
ASSESS		<b>Topic 10:</b> Topic Assessment	
CORE	<u>5.NF.4, 5.NF.4.a, 5.NF.6</u> 4. Apply and extend previous understandings of multiplication to	<b>Topic 11:</b> 11-1: Multiplying	



	<p>multiply a fraction or whole number by a fraction.</p> <p>a. Interpret the product <math>(\frac{a}{b}) \times q</math> as <math>a</math> parts of a partition of <math>q</math> into <math>b</math> equal parts; equivalently, as the result of a sequence of operations <math>a \times q \div b</math>. For example, use a visual fraction model to show <math>(\frac{2}{3}) \times 4 = \frac{8}{3}</math>, and create a story context for this equation. Do the same with <math>(\frac{2}{3}) \times \frac{4}{5} = \frac{8}{15}</math>. (In general, <math>(\frac{a}{b}) \times (\frac{c}{d}) = \frac{ac}{bd}</math>.)</p> <p><b>5.NF.6</b></p> <p>6. Solve real world problems involving multiplication of fractions and mixed numbers, e.g., by using visual fraction models or equations to represent the problem.</p>	Fractions and Whole Numbers		<p><b>Scaling:</b> Comparing the actual length of an object to a drawing of the object.</p> <p><b>Resizing:</b> When you increase or decrease the size of a object but it shapes remains similar.</p> <p><b>Reciprocals:</b> A given number is a reciprocal of another number if the product of the numbers is one. Example: The numbers <math>\frac{1}{8}</math> and <math>\frac{8}{1}</math> are reciprocals because <math>\frac{1}{8} \times \frac{8}{1} = 1</math>.</p>
CORE	<b>5.NF.5.a.</b>	<b>Topic 11:</b> CC-15: Estimating Products		
CORE	<b>5.NF.4, 5.NF.4.a, 5.NF.6</b>	<b>Topic 11:</b> 11-2: Multiplying Two Fractions		
CORE	<p><b>5.NF.4.b</b></p> <p>Explaining why multiplying a given number by a fraction greater than 1 results in a product greater than the given number (recognizing multiplication by whole numbers greater than 1 as a familiar case); explaining why multiplying a given number by a fraction less than 1 results in a product smaller than the given number; and relating the principle of fraction equivalence <math>\frac{a}{b} = \frac{n \times a}{n \times b}</math> to the effect of multiplying <math>\frac{a}{b}</math> by 1.</p>	<b>Topic 11:</b> CC-16: Area of Rectangle		
CORE	<b>5.NF.4, 5.NF.4.a, 5.NF.6</b>	<b>Topic 11:</b> 11-3: Multiplying Mixed Numbers		

CORE	<p><b>5.NF.5.b, 5.NF.5</b> Explaining why multiplying a given number by a fraction greater than 1 results in a product greater than the given number (recognizing multiplication by whole numbers greater than 1 as a familiar case); explaining why multiplying a given number by a fraction less than 1 results in a product smaller than the given number; and relating the principle of fraction equivalence <math>a/b = (n \times a)/(n \times b)</math> to the effect of multiplying <math>a/b</math> by 1.</p>	<p><b>Topic 11:</b> CC-17: Multiplication as Scaling</p>	
CORE	<p><b>5.NF.7</b> Apply and extend previous understandings of division to divide unit fractions by whole numbers and whole numbers by unit fractions. <b>5.NF.7.b</b> Interpret division of a whole number by a unit fraction, and compute such quotients. For example, create a story context for <math>4 \div (1/5)</math>, and use a visual fraction model to show the quotient. Use the relationship between multiplication and division to explain that <math>4 \div (1/5) = 20</math> because <math>20 \times (1/5) = 4</math>.</p>	<p><b>Topic 11:</b> 11-4: Relating Division to Multiplication of Fractions</p>	
CORE	<p><b>5.NF.7</b> <b>5.NF.7.a</b> Interpret division of a unit fraction by a non-zero whole number and compute such quotients. For example, create a story context for <math>(1/3) \div 4</math>, and use a visual fraction model to show the quotient. Use the relationship between multiplication and division to explain that <math>(1/3) \div 4 = 1/12</math> because <math>(1/12) \times 4 = 1/3</math>. <b>5.NF.7.c</b> Solve real world problems involving division of unit fractions by non-zero whole numbers and division of whole numbers by unit fractions, e.g., by using visual fraction models and equations to represent the problem. For example, how much chocolate will each person get if 3 people share <math>1/2</math> lb. of chocolate equally? How many <math>1/3</math>-cup servings are in 2 cups of raisins?</p>	<p><b>Topic 11:</b> CC-18: Dividing Unit Fractions by Non- Zero Whole Numbers</p>	

CORE	<b><u>4.OA.2</u></b>	<b>Topic 11:</b> 11-5: Problem Solving: Draw a Picture and Write an Equation	Reviews 4.OA.2	
ASSESS		<b>Topic 11:</b> Topic 11 Assessment		

**MARCH & APRIL (20 & 16 days)**

TOPIC 12 - PERIMETER AND AREA

TOPIC 13 - SOLIDS

TOPIC 14 - MEASUREMENT UNITS, TIME, AND TEMPERATURE

TOPIC 15 - SOLVING AND WRITING EQUATIONS AND INEQUALITIES

TOPIC 16 - RATIO AND PERCENT

TOPIC 17 - EQUATIONS AND GRAPHS

REVIEW, CORE, EXTEND, ASSESS	COMMON CORE STANDARD	ENVISION LESSON	NOTES	VOCABULARY
CORE	<b><u>5.MD.1</u></b> Convert among different-sized standard measurement units within a given measurement system (e.g., convert 5 cm to 0.05 m), and use these conversions in solving multi-step, real world problems.	<b>Topic 12:</b> 12-1: Using Customary Units of Length		
CORE	<b><u>5.MD.1</u></b>	<b>Topic 12:</b> 12-2: Using Metric Units of Length		
REVIEW	<b><u>4.MD.3</u></b> Apply the area and perimeter formulas for rectangles in real world and mathematical problems. <i>For example, find the width of a rectangular room given the area of the flooring and the length, by viewing the area formula as a multiplication equation with an unknown factor.</i>	<b>Topic 12:</b> 12-3: Perimeter		
REVIEW	<b><u>4.MD.3</u></b>	<b>Topic 12:</b>		

		12-4: Area of Squares and Rectangles		
REVIEW	<u>4.MD.3</u>	<b>Topic 12:</b> 12-5: Area of Parallelograms	OPTIONAL LESSONS IF TIME ALLOWS	
EXTEND	<u>6.G.1</u>	<b>Topic 12:</b> 12-6: Area of Triangles 12-7: Circles and Circumference	OPTIONAL LESSONS IF TIME ALLOWS	
EXTEND	<u>7.G.4</u>	<b>Topic 12:</b> 12-8: Problem Solving: Draw a Picture and Make an Organized List	OPTIONAL LESSONS IF TIME ALLOWS	
ASSESS		<b>Topic 12:</b> Topic 12 Assessment		
EXTEND	<u>6.G.4</u>	<b>Topic 13:</b> 13-1: Solids 13-2: Relating Shapes and Solids 13-3: Surface Area	OPTIONAL LESSONS IF TIME ALLOWS	<b>Three-dimensional shape:</b> Any geometric solid  <b>Face:</b> A flat surface of a solid that does not roll.  <b>Cube:</b> A solid figure with six congruent squares as its faces.  <b>Edges:</b> A line segment where
CORE	<u>5.MD.3.a</u> A cube with side length 1 unit, called a “unit cube,” is said to have “one cubic unit” of volume, and can be used to measure volume.	<b>Topic 13:</b> 13-4: Views of Solids		
CORE	<u>5.MD.3</u> Recognize volume as an attribute of solid figures and understand concepts of volume measurement. <u>5.MD.3.b</u> A solid figure that can be packed without gaps or overlaps using $n$ unit cubes is said to have a volume of $n$ cubic units.	<b>Topic 13:</b> CC-19: Models and Volumes		

	<p><b>5.MD.4</b> Measure volumes by counting unit cubes, using cubic cm, cubic in, cubic ft., and improvised units.</p> <p><b>5.MD.5a</b> Relate volume to the operations of multiplication and addition and solve real world and mathematical problems involving volume.</p> <p>Find the volume of a right rectangular prism with whole-number side lengths by packing it with unit cubes, and show that the volume is the same as would be found by multiplying the edge lengths, equivalently by multiplying the height by the area of the base. Represent threefold whole-number products as volumes, e.g., to represent the associative property of multiplication.</p>			<p>two faces of a solid figure meet.</p> <p><b>Vertices (vertex):</b> The point where two rays meet to form an angle. The points where the sides of a polygon meet. The points where three or more edges meet in a solid figure that does not roll. The pointed part of a cone.</p>
CORE	<p><b>5.MD.3, 5.MD.3.b., 5.MD.5, 5.MD.5.a, 5.MD.5.b</b> Apply the formulas <math>V = l \times w \times h</math> and <math>V = b \times h</math> for rectangular prisms to find volumes of right rectangular prisms with whole-number edge lengths in the context of solving real world and mathematical problems.</p>	<p><b>Topic 13:</b> 13-5: Volume</p>		<p><b>Prism:</b> A solid figure with two congruent parallel bases and faces that are parallelograms.</p> <p><b>Cylinder:</b> A solid figure with two congruent circular bases.</p>
CORE	<p><b>5.MD.5.c</b> Recognize volume as additive.</p> <p><b>5.MD.5.b</b> Find volumes of solid figures composed of two non-overlapping right rectangular prisms by adding the volumes of the non-overlapping parts, applying this technique to solve real world problems.</p>	<p><b>Topic 13:</b> CC-20: Combining Volume</p>		<p><b>Cone:</b> A solid figure with a base that is a circle and a curved surface that meets at a point.</p>
CORE	<p><b>5.MD.5, 5.MD.5.c</b></p>	<p><b>Topic 13:</b> 13-6: Irregular Shapes and Solids</p>		<p><b>Pyramid:</b> A solid figure whose base is a polygon and whose faces are triangles with a</p>

CORE		<b>Topic 13:</b> 13-7: Problem Solving: Use Objects and Solve a Simpler Problem		common vertex.  <b>Volume:</b> The number of cubic units needed to fill a solid figure.  <b>Cubic Unit:</b> The volume of a cube that measures 1 unit on each edge.
ASSESS		<b>Topic 13:</b> Topic 13 Assessment		
CORE	<b>5.MD.1</b> Convert among different-sized standard measurement units within a given measurement system (e.g., convert 5 cm to 0.05 m), and use these conversions in solving multi-step, real world problems.	<b>Topic 14:</b> 14-1: Customary Units of Capacity		<b>Line Plot:</b> A display of data along a number line.  <b>Outlier:</b> A number in a data set that is very different from the rest of the numbers.  <b>Survey:</b> Collecting information by asking a number of people the same question and recording their answers,
CORE	<b>5.MD.1</b>	<b>Topic 14:</b> 14-2: Metric Units of Capacity		
CORE	<b>5.MD.1</b>	<b>Topic 14:</b> 14-3: Units of Weight and Mass		
CORE	<b>5.MD.1</b>	<b>Topic 14:</b>		

		14-4: Converting Customary Units		<b>Data:</b> Pieces of collected information.  <b>Sample:</b> A representative part of a larger group.  <b>Frequency Table:</b> A table used to show the number of times something occurs.
CORE	<b>5.MD.1</b>	<b>Topic 14:</b> 14-5: Converting Metric Units		
EXTEND	<b>5.MD.1</b>	<b>Topic 14:</b> 14-6: Elapsed Time 14-7: Elapsed Time in Other Units 14-8: Temperature Change 14-9: Problem Solving: Make a Table	OPTIONAL LESSONS IF TIME ALLOWS	
ASSESS		<b>Topic 14:</b> Topic 14 Assessment		
ASSESS	CFA #3	Topics 10, 11, 12, 13, 14		Completed by March 30
EXTEND	<b>6. EE.2</b> Write, read, and evaluate expressions in which letters stand for numbers.	<b>Topic 15:</b> 15-1: Solving Addition and Subtraction Equations 15-2: Solving Multiplication and Division Equations 15-3: Inequalities and the Number Line	OPTIONAL LESSONS IF TIME ALLOWS	
EXTEND	<b>5.OA.3</b> Generate two numerical patterns using two given rules. Identify apparent relationships between corresponding terms. Form ordered pairs consisting of corresponding terms from the two patterns, and graph the ordered pairs on a coordinate plane. <i>For example, given the rule "Add 3" and the starting number 0, and given the</i>	<b>Topic 15:</b> 15-4: Patterns and Equations		



	<i>rule “Add 6” and the starting number 0, generate terms in the resulting sequences, and observe that the terms in one sequence are twice the corresponding terms in the other sequence. Explain informally why this is so.</i>			
EXTEND	<b><u>6.EE.2</u></b>	<b>Topic 15:</b> 15-5: Problem Solving: Draw a Picture and Write and Equation	OPTIONAL LESSONS IF TIME ALLOWS	
ASSESS		<b>Topic 15:</b> Topic 15 Assessment		
EXTEND	<b><u>6.RP.1</u></b>	<b>Topic 16:</b> 16-1: Understanding Ratios 16-2: Understanding Percent 16-3: Percent, Fractions, and Decimals 16-4: Finding Percent of a Whole Number	OPTIONAL LESSONS IF TIME ALLOWS	
CORE	<b><u>5.OA.3</u></b> 3. Read, write, and compare decimals to thousandths. a. Read and write decimals to thousandths using base-ten numerals, number names, and expanded form, e.g., $347.392 = 3 \times 100 + 4 \times 10 + 7 \times 1 + 3 \times (1/10) + 9 \times (1/100) + 2 \times (1/1000)$ . b. Compare two decimals to thousandths based on meanings of the digits in each place, using $>$ , $=$ , and $<$ symbols to record the results of comparisons.	<b>Topic 16:</b> 16-5: Problem Solving: Draw a Picture and Write an Equation		
ASSESS		<b>Topic 16:</b> Topic 16 Assessment		

EXTEND	<b>6.NS.5</b>	<b>Topic 17:</b> 17-1: Understanding Integers	OPTIONAL LESSON IF TIME ALLOWS	
CORE	<p><b>5.G.1.</b> Use a pair of perpendicular number lines, called axes, to define a coordinate system, with the intersection of the lines (the origin) arranged to coincide with the 0 on each line and a given point in the plane located by using an ordered pair of numbers, called its coordinates. Understand that the first number indicates how far to travel from the origin in the direction of one axis, and the second number indicates how far to travel in the direction of the second axis, with the convention that the names of the two axes and the coordinates correspond (e.g., x-axis and x-coordinate, y-axis and y-coordinate).</p> <p><b>5.G.2.</b> Represent real world and mathematical problems by graphing points in the first quadrant of the coordinate plane, and interpret coordinate values of points in the context of the situation.</p>	<b>Topic 17:</b> 17-2: Ordered Pairs		
CORE	<b>5.G.1</b>	<b>Topic 17:</b> 17-3: Distances on a Number Line		
CORE	<b>5.G.1</b>	<b>Topic 17:</b> CC-21: Distances on the Coordinate Plane		
CORE	<p><b>5.G.1, 5.G.2</b></p> <p><b>5.OA.3</b> Generate two numerical patterns using two given rules. Identify apparent relationships between corresponding terms. Form ordered pairs consisting of corresponding terms</p>	<b>Topic 17:</b> CC-22: Patterns and Graphing		

	from the two patterns, and graph the ordered pairs on a coordinate plane. For example, given the rule “Add 3” and the starting number 0, and given the rule “Add 6” and the starting number 0, generate terms in the resulting sequences, and observe that the terms in one sequence are twice the corresponding terms in the other sequence. Explain informally why this is so.			
CORE	<b><u>5.G.1, 5.G.2, 5.OA.3</u></b>	<b>Topic 17:</b> CC-23: More Patterns and Graphing		
EXTEND	<b><u>Prepares for 6.EE.9</u></b>	<b>Topic 17:</b> 17-4: Graphing Equations 17-5: Problem Solving: Work Backward	OPTIONAL LESSONS IF TIME ALLOWS	
ASSESS		<b>Topic 17:</b> Topic 17 Assessment		

**MAY & JUNE** (24 days)

Topic 18: Graphs and Data

Topic 19: Transformations, Congruence, and Symmetry

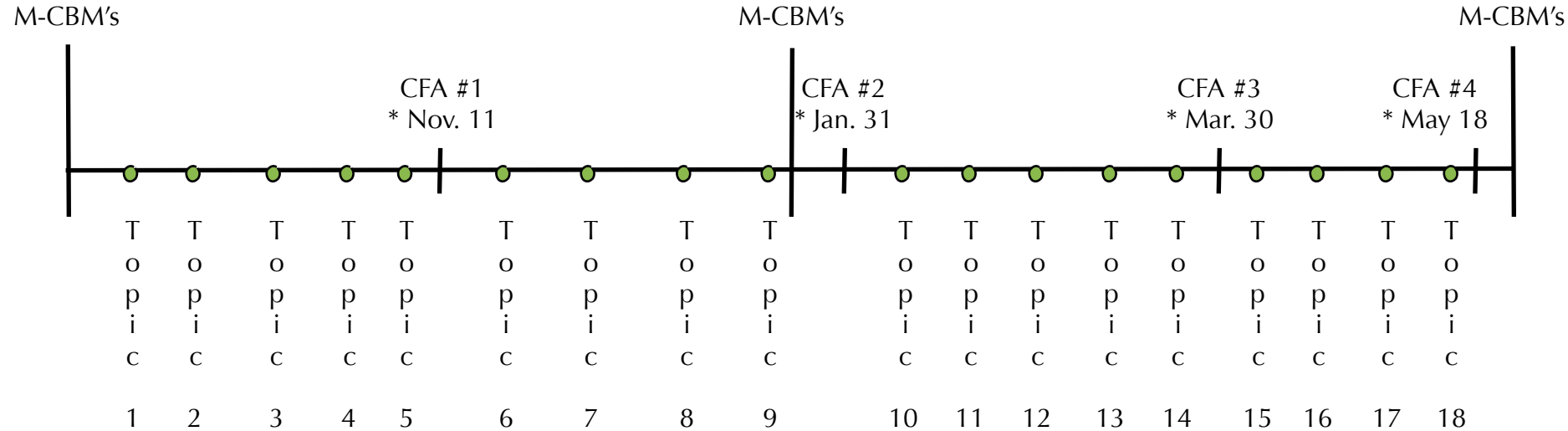
Topic 20: Probability

REVIEW, CORE, EXTEND, ASSESS	COMMON CORE STANDARD	ENVISION LESSON	NOTES	VOCABULARY
ASSESS	M-CBM	M-COMP & M-CAP		May 7 - 25
EXTEND	Prepares for 6.SP.1	<b>Topic 18:</b> 18-1: Data from Surveys	OPTIONAL LESSONS IF TIME ALLOWS	<p><b>Coordinate Grid:</b> A grid used to show ordered pairs</p> <p><b>X-Axis:</b> A horizontal line that includes both positive and negative numbers.</p> <p><b>Y-Axis:</b> A vertical line that includes both positive and negative numbers.</p> <p><b>Origin:</b> The point where the two axes of a coordinate plane intersect. The origin is represented by the ordered pair (0,0)</p>
CORE	<b>5.MD.2</b> Represent and interpret data. 2. Make a line plot to display a data set of measurements in fractions of a unit ( $\frac{1}{2}$ , $\frac{1}{4}$ , $\frac{1}{8}$ ). Use operations on fractions for this grade to solve problems involving information presented in line plots. For example, given different measurements of liquid in identical beakers, find the amount of liquid each beaker would contain if the total amount in all the beakers were redistributed equally.	<b>Topic 18:</b> 18-2: Bar Graphs and Picture Graphs		
CORE	<b>5.MD.2</b>	<b>Topic 18:</b> CC-24: Making Line Plots		
CORE	<b>5.MD.2</b>	<b>Topic 18:</b> CC-25: Measurement Data		
EXTENDS	Prepares for 6.SP.4 and 6.SP.3	<b>Topic 18:</b>	OPTIONAL	

		18-3: Line Graphs 18-4: Stem-and-Leaf Plots 18-5: Histograms 18-6: Circle Graphs 18-7: Mean 18-8: Median, Mode, and Range 18-9: Problem Solving: Make a Graph	LESSONS IF TIME ALLOWS	<p><b>Ordered Pair:</b> A pair of numbers that names a point on a coordinate grid.</p> <p><b>X-Coordinate:</b> The first number in an ordered pair, which names the distance to the right or left from the origin along the x-axis.</p> <p><b>Y-Coordinate:</b> The second number in an ordered pair, which names the distance up or down from the origin along the y-axis.</p>
ASSESS		<b>Topic 18:</b> Topic 18 Assessment		
ASSESS	CFA #4	Topics 15, 16, 17, 18		Completed by May 18
EXTEND/ REVIEW	Reviews 4.G.3 (Lesson 19-5)	<b>Topic 19:</b> 19-1: Translations 19-2: Reflections 19-3: Rotations 19-4: Congruence 19-5: Symmetry (Review) 19-6: Problem Solving: Use Objects	OPTIONAL LESSONS IF TIME ALLOWS	
ASSESS		<b>Topic 19:</b> Topic 19 Assessment		
EXTEND	No CCSS	<b>Topic 20:</b> 20-1: Outcomes	OPTIONAL LESSONS IF TIME	

		20-2: Writing Probability as a Fraction 20-3: Experiments and Predictions 20-4: Problem Solving: Solve a Simpler Problem	ALLOWS	
ASSESS		<b>Topic 20:</b> Topic 20 Assessment		

5th grade  
Math Assessment Continuum



● = optional assessment

\* Please submit quarterly CFA scores  
to your school principal by this date.

**5th Grade CCSS Vocabulary Word List**  
**Revised 5/24/11**

addend	equivalent fractions
algorithm	estimate
area	evaluate
area model	expanded form
array	exponent
Associative Property of Addition	expression
Associative Property of Multiplication	factor
attribute	finite decimal
axis (axes)	formula
base of an exponent	greater than
base of a solid figure	hundredth
benchmark fractions	hundredths
braces	improper fraction
brackets	inequality
centimeter (cm)	intersect
Commutative Property of Addition	less than
Commutative Property of Multiplication	like denominators
compose	line plot
coordinate plane	long division
coordinate system	lowest terms
coordinates	meter (m)
corresponding terms	metric system
cubic unit	millimeter (mm)
customary system	minuend
data	mixed number
decimal	Multiplicative Identity Property of 1
decimal point	numerator
decompose	Order of Operations
denominator	ordered pair
difference	origin
Distributive Property	parentheses
dividend	perpendicular
divisor	place value
equation	plane



**5th Grade CCSS Vocabulary Word List**  
**Revised 5/24/11**

powers of ten	tenth
product	tenths
proper fraction	term
quadrants	thousandth
quotient	thousandths
remainder	three-dimensional figures
right rectangular prism	tiling
right triangle	two-dimensional figures
rounding	unit cube
scaling	unit fraction
sequence	unlike denominators
simplest form	volume
simplify	whole numbers
solid figure	x-axis
standard form	x-coordinate
subtrahend	y-axis
sum	y-coordinate

# The Core **and MORE** Instruction Checklist

The CCSS Standard: The Envision Lesson:	
<b>EXPLICIT INSTRUCTION</b> <b>I do it, We do it, Y'all do it, You do it</b>	<b>ENGAGEMENT</b> <b>All Students Saying, Writing, Doing</b>
<b>PROACTIVE PLANNING</b>	<b>VOCABULARY WORDS</b>
The following questions should be considered for each part of the lesson: <ul style="list-style-type: none"> <li>- What are the predictable failures for this lesson? (conceptually and behaviorally)</li> <li>- How will you prevent these failures?</li> <li>- What will you do to maintain consistency?</li> <li>- How will you know if it is working?</li> </ul>	
<div> <input type="checkbox"/> cumulative review           <input type="checkbox"/> higher-order thinking, ask why           <input type="checkbox"/> have students visualize, draw, model           <input type="checkbox"/> real-world contexts         </div> <div> <input type="checkbox"/> math vocabulary           <input type="checkbox"/> milk the data           <input type="checkbox"/> incorporate measurement           <input type="checkbox"/> number sense         </div>	
<b>ANTICIPATORY SET</b> <span style="float: right;">(5 MINUTES)</span>	
Choose from the many options: <ul style="list-style-type: none"> <li><input type="checkbox"/> <i>Review What You Know</i></li> <li><input type="checkbox"/> <i>Interactive Math Stories</i></li> <li><input type="checkbox"/> <i>Math Journaling</i></li> <li><input type="checkbox"/> <i>Spiral Review</i></li> <li><input type="checkbox"/> <i>Problem of the Day</i></li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Choral Responses</li> <li><input type="checkbox"/> Partner Responses</li> <li><input type="checkbox"/> Written Responses</li> <li><input type="checkbox"/> Random call on students (No hand raising)</li> </ul>

<b>BUILDING A FOUNDATION</b>		(5-10 MINUTES)
<i>The Language of Math: Vocabulary instruction</i> 1- How will you explicitly teach new vocabulary? 2- How will you provide multiple opportunities for vocabulary to be used in context?		<input type="checkbox"/> Choral Responses <input type="checkbox"/> Partner Responses <input type="checkbox"/> Written Responses <input type="checkbox"/> Random call on students (No hand raising)
<b>WHOLE GROUP INSTRUCTION: Concrete</b>		(10-15 MINUTES)
<i>Develop the Concept: Interactive Learning (Hands-on)</i>  1- What materials/manipulatives will you need? 2- Will each student have enough materials to model the problems? -If they do not, will you have them pair up or adjust the problems? 3- Where will students record their work during this phase of the lesson? 4- How will you check for understanding during this phase of the lesson? 5- Will you use the <i>Extend</i> ? 6- Will you use the <i>Link to Investigations</i> ?		<input type="checkbox"/> Choral Responses <input type="checkbox"/> Partner Responses <input type="checkbox"/> Written Responses <input type="checkbox"/> Paper <input type="checkbox"/> Math Journal <input type="checkbox"/> Individual Whiteboards <input type="checkbox"/> Student page from the topic pouch <input type="checkbox"/> Random call on students (No hand raising)
<b>SCAFFOLDED INSTRUCTION: Representational</b>		(15-20 MINUTES)
<i>Develop the Concept: Visual</i>  The <i>Visual Learning Bridge</i> , at the top of each lesson, is critical to connecting the Concrete to the Representational and then to the Abstract. Look for <i>Prevent Misconceptions</i> .  Choose one option: <input type="checkbox"/> <i>Visual Learning Animation</i> (on-line or CD) <input type="checkbox"/> Overhead Transparency <input type="checkbox"/> <i>Visual Learning Bridge</i> in Student textbook <input type="checkbox"/> Document camera		<input type="checkbox"/> Choral Responses <input type="checkbox"/> Partner Responses <input type="checkbox"/> Written Responses <input type="checkbox"/> Random call on students (No hand raising)

<ul style="list-style-type: none"> <li>1- Check for understanding during the <i>Guided Practice</i>.</li> <li>2- Where will students record their work?</li> <li>3- If most students are struggling during this phase of the lesson, what will you do? <ul style="list-style-type: none"> <li><input type="checkbox"/> Reteach explicitly with various problems from the <i>Guided or Independent Practice</i> or the <i>Reteaching</i> sets at the back of the <i>Topic Guide</i>.</li> <li><input type="checkbox"/> Use lessons from <i>Meeting Individual Needs</i>.</li> <li><input type="checkbox"/> Use the <i>Differentiated Instruction: Intervention</i> lesson.</li> </ul> </li> <li>4- Will some of the problems from the <i>Problem Solving</i> be included in your <i>Guided Practice</i> or <i>Independent Practice</i>?</li> </ul>	
<b>INDEPENDENT PRACTICE: ABSTRACT</b>	(15-20 MINUTES)
<p><i>Independent Practice and Problem Solving</i></p> <ul style="list-style-type: none"> <li>1- Which problems will you assign?</li> <li>2- Where will students record their work?</li> <li>3- Will you collect, grade and record the independent practice?</li> <li>4- How will you check for understanding?</li> <li>5- If students do not finish the problems assigned for independent practice, will these problems be homework?</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Choral Responses</li> <li><input type="checkbox"/> Partner Responses</li> <li><input type="checkbox"/> Written Responses</li> <li><input type="checkbox"/> Random call on students (No hand raising)</li> </ul>
<b>FORMATIVE ASSESSMENT</b>	(5-10 MINUTES)
<p>Concept Understanding</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> PLC/Grade-Level common formative assessment</li> <li><input type="checkbox"/> <i>Quick Check</i> (in <i>Teacher Resource Masters</i>)</li> <li><input type="checkbox"/> <i>Writing to Explain</i></li> <li><input type="checkbox"/> <i>Mind Game Quiz Show</i></li> <li><input type="checkbox"/> Student buzzers or AverPens</li> </ul> <p>Formative Assessment Tools</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> <i>Topic tests</i> (online or in text)</li> <li><input type="checkbox"/> <i>Item Analysis for Diagnosis and Intervention</i></li> <li><input type="checkbox"/> <i>Free-Response Test</i></li> <li><input type="checkbox"/> <i>Performance Assessment</i></li> <li><input type="checkbox"/> CBM-Math</li> </ul>	

- ☐ PLC/Grade-Level common formative assessment
- ☐ Other assessment tool

End of each Quarter:

- ☐ *District Common Formative Assessment (CFA)*

## CENTER ACTIVITIES

(15 - 45 MINUTES)

\*This part of the lesson is beneficial for providing engaging activities while the teacher works with small groups of students who need supplemental instruction.

Choose from the many options:

- ☐ *Differentiated Instruction*
- ☐ *Math Project*
- ☐ *Meeting Individual Needs*
- ☐ Teacher-led interventions
- ☐ *Leveled Homework*
- ☐ Online games from *Envision Digital Premium*

- 1- Will you do these activities and if so, when?
- 2- When will you give directions on how to play?
- 3- What materials will be needed for the activities?
- 4- Will you work with the Intervention group?
- 5- How will you determine which activities will be assigned to each group of students?

## HOMEWORK

Choose from the many options:

- ☐ Finish *Independent Practice* and/or *Problem Solving* assignment
- ☐ *Spiral Review*
- ☐ *Quick Check*
- ☐ *Leveled Homework*
- ☐ Online games from *Envision Digital Premium*
- ☐ Online tutorials from *Envision Digital Premium*

- 1- Will you collect and grade homework?
- 2- Will you discuss homework? Is so, when?